IMAGE

Imaging features of complete agenesis of corpus callosum in a 3-year-old child

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A 3-year-old male child presented to the Pediatric Outpatient Department with history of gross developmental delay. He was the product of normal vaginal delivery with an immediate cry at birth. Antenatal history of the mother was also insignificant. Table 1 shows a summary of the developmental milestones checklist of the child.

The patient was referred to the Department of Radiology for magnetic resonance imaging (MRI) of brain. Features of brain MRI included parallel

Table 1 - Developmental milestones of the patient.

Gross motor milestones	**Normally achieved at**	**Status**
Neck holding	3–4 months	Not achieved
Rolling over	6 months	Not achieved
Sitting with support	6 months	Not achieved
Sitting without support	8 months	Not achieved
Stands with support	10 months	Not achieved
Stands without support	12 months	Not achieved
Fine motor milestones	**Normally achieved at**	**Status**
Bidextrous reach for objects	4 months	Not achieved
Unidextrous reach for objects	6 months	Not achieved
Immature pincer grasp	9 months	Not achieved
Social milestones	**Normally achieved at**	**Status**
Social smile	2 months	6 months
Recognize mother	3 months	6 months
Stranger anxiety	6 months	2 years
Waves bye bye	9 months	Not achieved

Continued

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Language milestones	Normally achieved at	Status
Alert to sound	1 month	6 months
Babbles and coos	3 months	1 year
Loud laughs and turn toward the sound	4 months	1 year
Monosyllables	6 months	Not achieved
Bisyllables	9 months	Not achieved

running prominent bilateral lateral ventricles with complete absence of corpus callosum (Figure 1a), and colpocephaly, i.e., dilatation of the occipital horns of lateral ventricles (Figure 1b). The mid-sagittal image showed the radial arrangement of the gyri (Figure 2). Coronal images showed widely spaced lateral ventricles giving a characteristic "moose head/Viking helmet sign" (Figure 3).

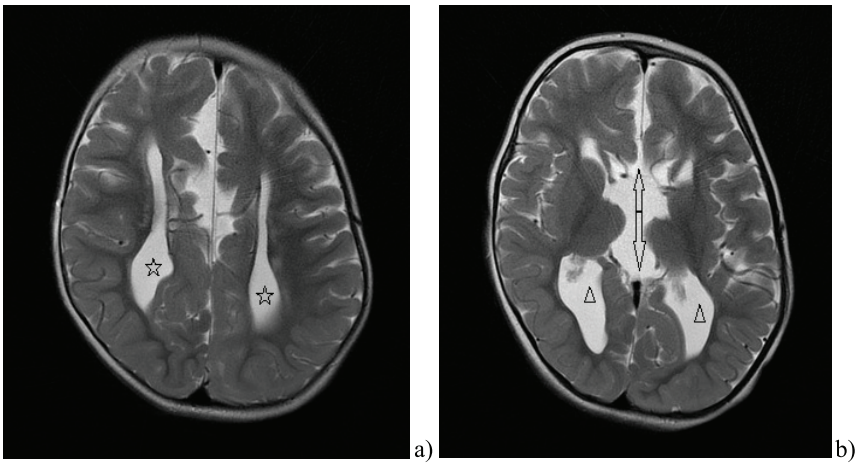

Figure 1 - Brain MRI T2-weighted axial sequence showing (a) widely spaced prominent lateral ventricles (star) and (b) complete absence of corpus callosum in midline (double arrow) with colpocephaly, i.e., dilated occipital horns of lateral ventricles (triangles).

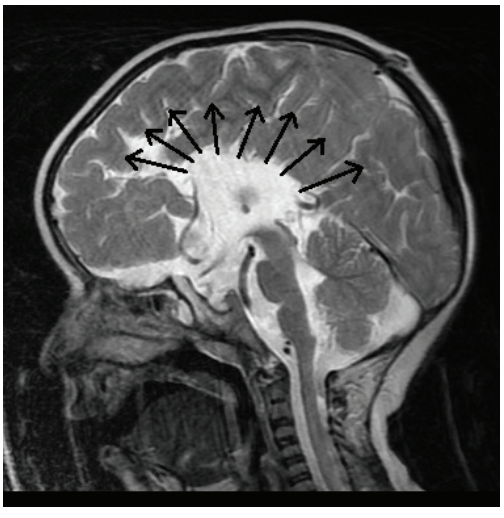

Figure 2 - Brain MRI T2-weighted sagittal sequence showing complete absence of corpus callosum with radial arrangement of cerebral gyri giving sunburst appearance (arrows).

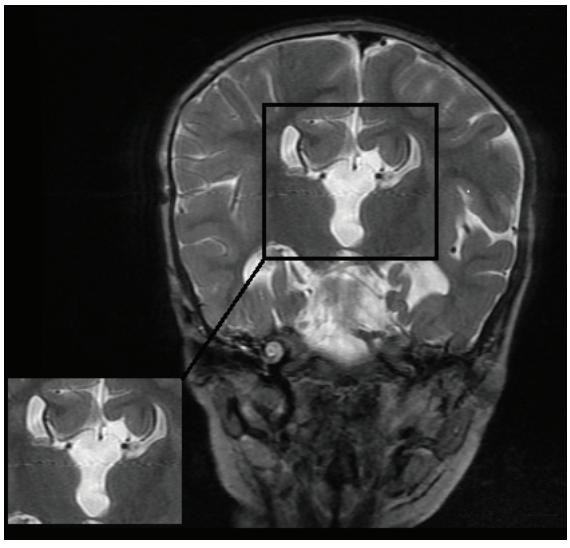

Figure 3 - Brain MRI T2-weighted coronal sequence showing widely spaced lateral ventricles depicting a characteristic "moose head/Viking helmet sign."

Dysgenesis of the corpus callosum can be partial or complete and can be primary (corpus callosum never formed) or secondary (corpus callosum secondarily destroyed after normal formation). The affected patients are mostly asymptomatic. Maternal alcohol consumption during pregnancy is a recognized risk factor, and males predominate over females. Agenesis of the corpus callosum is often associated with a number of aneuploidy and non-aneuploidy syndromes. It is also associated with other central nervous system malformations. The prognosis of the patient depends on the associated anomalies and treatment includes conservative management with rehabilitation [1,2].

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